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ABSTRACT

Usable data relating to six elements of job satisfaction: work, supervision, people, pay, promotion, and total satisfaction, were collected from 190 of a total sample of 310 librarians, chosen by stratified random sampling techniques from library association membership lists. The librarians, both male and female, represented three types of libraries: public, college/university, and special. One purpose of the research was to determine the differences in job satisfaction between the three types of libraries. Additional questions concerned the variations in satisfaction, if any, attributable to sex and/or to size of the library staff and how librarians' scores compared with population norms on two scales of the data collection instrument, the Job Descriptive Index (JDI). JDI scores were tested by means of t-tests and analysis of variance. The conclusions drawn were that: (1) Job satisfaction is partially a function of type of library. (2) Special librarians evidence less job satisfaction due to restricted promotional opportunities and greater work stress. (3) Women are generally happier as librarians than men. (4) Librarians are generally more satisfied than other workers. (5) Staff size has little or no effect on job satisfaction. (Author/SL)

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AN ANALYSIS OF JOB SATISFACTION AMONG
PUBLIC, COLLEGE OR UNIVERSITY,
AND SPECIAL LIBRARIANS

DISSERTATION

Presented to the Graduate Council of the
North Texas State University in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

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Denton, Texas

August, 1975

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AN ANALYSIS OF JOB SATISFACTION AMONG
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CHAPTER I

INTRODUCTION TO THE STUDY

Statement of the Problem

The problem of this study was the determination of the relative differences in the job satisfaction of professional librarians employed in public, college or university, and special libraries.

Purposes of the Study

The purposes of the study were:

1. To determine the differences, if any, in the job satisfaction of professional librarians who work in special, college or university, and public libraries.
2. To determine if these differences were a factor of sex.
3. To determine if these differences were a factor of the size of the library staff.

Background and Significance of the Study

According to Dunn and Stephens, job satisfaction is the sum of feelings an employee has about his job (1, p. 314). Vroom reports that positive attitudes toward the job may be considered as job satisfaction while negative attitudes toward the job are considered as job dissatisfaction (9, p. 99). The area of job satisfaction research

and assessment has been an active concern to management since the publication of R. Hoppock's study, Job Satisfaction, in 1935 in the United States. Locke states that by 1955 over 2,000 articles had been published on job satisfaction (4, p. 309).

In early studies of job satisfaction, the assumption was made that job satisfaction had a unidimensional character; that is, that the same properties of the job determined both satisfaction and dissatisfaction. Frederick Herzberg and associates, in 1959, reported that their studies led them to conclude that job satisfaction and job dissatisfaction are caused by two different sets of job factors. These factors Herzberg called job satisfiers and job dissatisfiers (2). Job satisfiers are those elements intimately associated with the job itself while job dissatisfiers are those elements which surround the job.

While Herzberg's two-factor theory presented a new aspect of job satisfaction research, many researchers now hold that job satisfaction is a complex of variables since workers can be satisfied with one or more parts of their job and dissatisfied with other elements of their job. Marconi has identified fifteen variables which have been employed by two or more researchers in recent years (5).

The subjects of job satisfaction research have ranged from manual laborers to professional workers. The instruments used in this research have ranged from devices

constructed for a single study to several research instruments which have been carefully constructed and tested and which possess reasonably high degrees of reliability and validity.

Only a limited number of research endeavors have been undertaken to determine the job satisfaction of librarians. In the main the research efforts have been limited to librarians working in one type of library; i. e., public, college or university, school, or special. Some have been limited to but one geographical area.

The present study centers on the question of how librarians in three different types of libraries view their jobs. Also pertinent to the present study is the factor of size of the total staff of the library and its possible influence on the job satisfaction of librarians. Still another concern of the present study is the consideration of sex differences on job satisfaction.

The knowledge gained by such a study should be of use to library science faculty interested in personnel management. Answers to the questions that follow result from research such as is attempted here.

1. Are special librarians happier in their work, which is often performed in an industrial setting, than the university librarian who often works in a magnificent architectural structure in an academic atmosphere?

2. What can library school faculties do to better prepare their product for a job in a library?

3. What, if anything, can library school faculties do to effect changes in the management of libraries to obviate problems of job satisfaction?

4. Can job satisfaction research influence changes in the design of jobs in libraries?

Rationale for Hypotheses

Public libraries differ from university or special libraries in several respects. The jobs librarians do are different, the clientele of the respective libraries is different, and types of libraries are clearly distinguished by the services they offer. Therefore, it is reasonable to try to determine if the job satisfaction of librarians in each of the types of libraries differs.

It is pertinent to consider the variable of work group size and the variable of sex. Vroom reports that the size of the work group has often been used as a variable in determining not only job satisfaction but job performance as well (10). Hulin and Smith have reported on studies of sex differences in job satisfaction in addition to conducting their own research on the subject (3).

The present study will also examine job satisfaction from the aspect of pay, supervision, interpersonnel relations, and the work itself. Marconi reports that each of

these variables has been employed extensively in recent job satisfaction studies.

Hypotheses

The present study was designed to test the hypotheses stated below.

1. Statistically significant differences in job satisfaction exist between public, special, and university librarians as measured by the Job Descriptive Index.
2. Statistically significantly greater job satisfaction exists among librarians on small staffs than among librarians on large staffs.
3. Librarians' JDI scores on Pay will be statistically significantly lower than the norms for other workers.
4. Librarians' JDI scores on Work will be statistically significantly higher than the norms for other workers.
5. Public librarians' JDI scores on (a) Promotion and (b) People will be statistically significantly higher than the scores of other librarians.
6. University librarians' JDI scores on Work will be statistically significantly lower than the scores of Public or Special Librarians.
7. Male librarians' JDI scores on (a) Pay and (b) Promotion will be statistically significantly higher than the scores of female librarians.

8. Female librarians' JDI scores on Work will be statistically significantly higher than the scores of male librarians.

9. Male university librarians' JDI scores on Pay will be statistically significantly higher than the scores of other librarians.

Definitions

The definitions which follow are provided for those terms which are either particularized terms or terms which are employed in this study in a restricted sense.

Job Descriptive Index (JDI) - A set of five scales which permits the respondent to describe his job satisfaction in terms of the following: Pay, Supervision, Co-workers, Promotions, Work.

Professional Librarian - A person possessing a master's degree in Library Science or holding active membership in a national library association.

Special Librarian - A professional librarian who works in a special library.

Special Library - A library designed to provide access to specialized information and placed within range of and addressed to meet the needs of a special clientele.

Norms - The Normative JDI scores reported by Patricia C. Smith in The Measurement of Satisfaction in Work and Retirement: A Strategy for the Study of Attitudes.

Small Staff - A small staff is that library staff which numbers nineteen or fewer total personnel.

Large Staff - A large staff is that library staff which numbers twenty or more total personnel.

Limitations

The limitations placed on this study stem from the research instrument and from the population surveyed.

Only those elements of job satisfaction that are constituents of the Job Descriptive Index are measured (9).

The samples of librarians the study examines were taken from that population of American librarians listed as active members in the 1974-75 Membership Directory of the Special Libraries Association and the 1974 Membership Directory of the American Library Association.

The limitation stated above will restrict the projection of the results inasmuch as they will not apply to those librarians not a member of one of the two organizations. The effect is anticipated to be negligible.

Assumptions

The following assumptions are posited for purposes of this study.

It is assumed that the stratified random sample chosen is representative of the three types of in-service librarians.

It is further assumed that the respondents have recorded true expressions of their attitudes.

The assumption is made that independent variables not considered in this study have no effect on the study.

In a few cases where a return has been included in the analysis even though the Job Descriptive Index was not completed fully, a computer program assigned the mean of the balance of the individual's Job Descriptive Index scores to the incompleeted portion.

Procedures for Collecting the Data

The Job Descriptive Index (JDI) was mailed to a stratified random sample of male and female, college and university, special, and public librarians. A total of 310 individuals were solicited for their views on their job satisfaction. A covering letter explained the purpose of the study and gave instructions in completing the Job Descriptive Index. All addressees were furnished with a self-addressed, stamped envelope in which to return the instrument. A follow-up letter was sent to the addressees eight days after the initial mailing.

Procedures for Treating the Data

The returned Job Descriptive Index answer sheets were scored and the answers were coded. These numerical values were then keypunched on eighty-column cards and read into the memory of the North Texas State University IBM 360-50

computer. Standard computer programs for the one-way and two-way analysis of variance were employed to analyze the data taken from the eighty-column cards. A posteriori multiple comparisons employing the Scheffé method at the .10 significance level were made to test the significance of differences in means.

The study is organized into the following chapters:

- Chapter I. Introduction to the study.
- Chapter II. Review of pertinent literature.
- Chapter III. Procedures for data collection
and analysis.
- Chapter IV. Analysis of the data.
- Chapter V. Summary, findings, conclusions,
implications, recommenda-
tions.

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CHAPTER II

REVIEW OF PERTINENT LITERATURE

Interest in workers' attitudes toward their jobs has occupied researchers in the United States for at least forty-five years. With reference to this point, Davis asserts that concern with job satisfaction in industry was evident over 175 years ago (3, pp. 176-193). One of the earliest studies of employee attitudes was performed by Kornhauser and Sharp during the period from June to December, 1930, at a manufacturing facility of the Kimberly-Clark Corporation (7, pp. 393-404). Basing their studies on interviews as well as questionnaires, the researchers reported that differences in supervisory technique among foreladies probably accounted for the differences in job attitudes of workers engaged in the same type of job.

The Kornhauser-Sharp paper related results which have been found in several studies subsequently. The researchers reported that among workers who experienced an unhappy home life, work attitudes were no more unfavorable than the average. "Likewise, and perhaps still more unexpectedly, efficiency ratings of employees showed no relationship to their attitudes" (7, p. 402). Kornhauser and Sharp also stated that they found

unfavorable work attitudes to be slightly correlated with lost time because of sickness (7, p. 402).

Of their pioneering research effort, Kornhauser and Sharp wrote:

The study sketchily portrayed in this paper is one small attempt to add to our reliably collected information about people at work. There is no end to the amount of such evidence needed if we are successfully to adjust ourselves to the new industrialism. Or may one be idealistic enough to say: if we are to adjust the new industrialism to the needs of human life? (7, p. 404).

Another far reaching study was being carried on at the same time as the Kornhauser-Sharp work. This study, the Hawthorne Experiment, involved the Harvard University Graduate School of Business Administration and the Western Electric Company. The experiment, which had considerable influence on the study of Industrial Psychology and on the establishment of Industrial Sociology as a branch of Sociology, was begun in Spring 1927 with five women employees as subjects. At first the focus was limited to working conditions and the examination of fatigue and monotony of the workers, but by 1931 the researchers were interviewing thousands of Hawthorne workers relative to their attitudes toward their work, their supervisors, and the organization (12, p. 3).

The Hawthorne Experiment demonstrated rather clearly that the work society controlled production to a marked degree, influenced worker morale and was a

cohesive force in uniting employees to work together. Of this society Maier writes:

Whether this informal organization resists change or cooperates depends upon its nature, which in turn, depends upon the way the situation is handled. When actions are taken by management in such a way that they conform to the wishes of the persons involved, and when the situations are made more free, carry responsibilities and privileges, and increase social status, cooperative behavior is most likely to appear. In a strict atmosphere, workers have many ways in which they can curtail productivity, the most common method being limitation of each individual's production to a specified number of units per day (8, p. 41).

In 1955 Brayfield and Crockett reported after reviewing the literature of employee attitudes to that time:

In summary, it appears that there is little evidence in the available literature that employee attitudes of the type usually measured in morale surveys bear any simple or, for that matter, appreciable relationship to performance on the job (1, p. 408).

The two pioneering research efforts reported above have been followed over the succeeding years by hundreds of job satisfaction studies which attempted to add to the knowledge the original studies produced. Researchers in the main have concentrated on the industrial setting. However, a number of recent studies have reported on the job attitudes of workers in the service industries, and a certain number have measured the attitudes of professional workers. Herzberg reported in 1974 that his research effort had been repeated over 200 times with individuals in various occupations and professions

(5, pp. 18-29). Included were workers in various areas of hospital work, insurance, and other clerical workers as well as engineers and workers in industrial organizations.

The job satisfaction of library workers, including professional librarians, has been measured in a limited number of studies over the past twenty-five years. The researchers, primarily librarians, have approached one segment of the library profession, either public or college, or one limited geographical location. The results, therefore, may be limited in their influence.

Goldhor comments concerning this point:

Many studies in librarianship are based on a sample of observations at one library; from such data it would be impossible to know whether the relationship in question holds equally true in large libraries, in smaller ones, in different types of libraries, and in libraries in other places (4).

In 1948 Alice Bryan, as part of the larger study titled The Public Library Inquiry solicited information from 1,837 professional librarians working in public libraries in the United States. A major portion of Bryan's inquiry was dedicated to gathering demographic information including economic and educational statistics, but one portion concerned the attitudes of librarians toward their chosen field.

In response to the question, "If you had your professional career to plan over again, do you think you

would choose librarianship as your life work?", 74 per cent of the professional librarians would do so (2, p. 133). Fewer men than women would elect librarianship if they had to do it all over again. Moreover, the degree of satisfaction with librarianship varied with the professional position of the respondents. Among mid-management ranks, 73 per cent of the men and 77 per cent of the women would choose librarianship again as a career while 82 per cent of both male and female top administrators would choose librarianship again (2, p. 134).

Luanne Thornton, in 1959, developed a scale to measure the attitudes of librarians toward their profession (13, pp. 15-26). The scale was constructed as a modified version of the Thurstone scale. The Thornton scale consisted of forty-six statements concerning the profession of librarianship. The author attempted to balance a statement favorable to librarianship with an unfavorable statement having the same idea content as the favorable statement. The forty-six statements were randomly arranged in a scale which permitted the subject to react to the statements with one of five answers ranging from strongly agree to strongly disagree. The Thornton attitude scale has a split-half reliability of .87 by the Spearman-Brown formula (13, p. 22). No reference to validity was made by the author.

Thornton sent copies of the scale to 220 librarians working in school, special, public, and college and university libraries in the state of Georgia. One hundred and thirteen replies were received of which 111 were usable. This marks a 51 per cent return.

Results of Thornton's study revealed that college and university librarians' attitudes were significantly less favorable toward their profession than that of special, school, and public librarians (13, p. 23). However, the groups of librarians varied greatly among themselves in their attitudes and no further implications were drawn by Thornton.

McMahon employed the Thornton scale in a study of thirty Tasmanian librarians in 1967 (9). McMahon reported that there were no statistically significant conclusions to be drawn from the study. It was found that the librarians in the sample exhibited "a mildly favorable attitude toward librarianship according to the Thornton scale" (9, p. 103). The attitudes of the twelve male librarians in the study toward librarianship were judged to be somewhat negative.

Morrison administered the Ghiselli Self-Description Inventory to a total of over 700 university librarians who replied to his request (11). This group of librarians included major and minor executives and non-supervisory librarians. The 700 librarians were employed

in libraries belonging to the Association of College and Research libraries.

Morrison attempted to determine the aspects of library science which were satisfying or dissatisfying to university librarians. He found that giving service to people was the most satisfying aspect of librarianship, being mentioned by one-half of the librarians. The second most satisfying aspect, according to 24 per cent of the librarians questioned, was building the collection of a library.

One-quarter of the academic librarians who replied to Morrison stated that the aspect of their work which was most dissatisfying to them was the nonprofessional, routine duties they had to perform. Nineteen per cent cited administrative detail or red tape as the most dissatisfying. The most dissatisfying task, according to 15 per cent of these librarians, was that associated with personnel management and related staff problems (11, p. 70).

The fact that 15 per cent of all of the librarians and 22 per cent of the major executive librarians found personnel management to be the most distasteful aspect of their jobs bodes ill for librarianship. Morrison found, moreover, that this complaint was more frequent among men than women and that, in fact, only 2 per cent of those responding took enough pleasure in personnel management

to name it their most satisfying duty (11, p. 72). Morrison explains that it is possible that these humanitarian librarians dislike having to discipline or terminate employees.

In 1971-72 William J. Vaughn conducted a study of the job satisfaction of professional, clerical, and student assistant members of the North Texas State University library staff. Vaughn's interest was in determining whether job satisfaction influences the effectiveness of a university library (15). For his purposes, Vaughn employed the Job Descriptive Index developed by Patricia C. Smith and associates at Cornell University during the period 1959-69.

The Job Descriptive Index (JDI) partitions job satisfaction into five particular and one general, or total criteria of job satisfaction. The total criterion is a sum of the five particular criteria pay, promotion, people, supervision, and work.

Vaughn examined the job satisfaction of the library workers in terms of undergraduate major, age, tenure, location of the job in the library and the level of the position occupied, among many other variables. Vaughn found that "The job satisfaction dimensions responsible for producing the greatest amount of satisfaction in the library are work itself, supervision, and people (15, p. 105)." Pay was found to be the greatest cause of

dissatisfaction among the staff members of this library and lack of promotion potential was the next greatest cause of dissatisfaction (15, p. 106).

In particular, Vaughn found that the clerical workers were dissatisfied while the professionals and professional library assistants are generally satisfied (15, p. 47).

In the Vaughn study of this university library, the author found that absenteeism is significantly greater among dissatisfied employees than among the satisfied. This is consistent with the studies of Kornhauser and Sharp (7, pp. 393-404), Kerr (6, pp. 105-133), and Metzner and Mann (10, pp. 467-485). Vaughn also found that employees at higher levels are more likely to experience job satisfaction than are employees at lower levels. He explains this by stating that higher levels of responsibility usually engender greater motivation to succeed (15, p. 68). Vaughn's findings are consistent with those of Bryan noted above.

Vaughn, with J. D. Dunn, later examined the job satisfaction of library staffs at five other university libraries in the Dallas area. The approach was similar to the original study: Professional and clerical members of the respective library staffs were requested to complete the Job Descriptive Index (14, pp. 163-177). A total of fifty-five variables was used with the 265 respondents

whose names were coded to provide anonymity. The authors related that the effect of employee satisfaction is unclear; for a time dissatisfied employees may be very productive, but over the long term, dissatisfied employees are inclined to either resist the organization or leave (14, p. 175).

The Vaughn and Dunn study, which examined the job satisfaction of members of particular departments, demonstrated the effectiveness of the JDI in locating trouble areas among small work groups. Interestingly, among these six libraries no one library was outstanding in all of the five areas tested by the JDI; one library might score highest on the element of supervision and score only moderately on the item of pay. Thus, while some of the chief librarians could be proud of one or more aspects of their staff's job satisfaction, all of the library directors were aware of one or more areas of their operation which would benefit from some managerial attention.

Summary

The literature of industrial management reveals an interest in job satisfaction which began at least forty-five years ago with the Kornhauser and Sharp study and the much longer Hawthorne Experiment. Evidence of the

continuing lively interest in this topic today is seen in the work of Herzberg and Smith among several others.

In librarianship, the interest has not been as marked or as research oriented. Early studies concentrated on surveying the personality and only secondarily the work satisfaction of librarians. All of the studies were limited to but one type of library or one geographical area. The recent studies by Vaughn and Vaughn and Dunn suggest that serious study of the job attitudes of university librarians is an area of interest to researchers outside the field as well as to librarians.

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CHAPTER III

PROCEDURES FOR DATA COLLECTION AND ANALYSIS

Introduction

This chapter will describe the nature and selection of the sample, the Job Descriptive Index, and collection and treatment of data. The rationale for statistical procedures employed is also given.

Description of the Sample

The number of librarians for the sample was determined by referral to the most recent printed statistics of library association membership and, in one instance, from the Executive Secretary of the association. The Association of College and Research Libraries reported 13,729 members on October 31, 1974 (3). The Special Libraries Association reported in 1974 in its journal Special Libraries that the strength of the organization membership was 8,343 (9, p. 201). In a telephone conversation with the researcher, Gerald Born, Executive Director of the Public Library Association of the American Library Association, reported the strength of the organization to be 8,840 members on February 10, 1975 (2).

A 1 per cent stratified random sample of 310 subjects was chosen, making allowances for monthly fluctuations in

membership. The large size of the population and the employment of stratified random sampling was considered to be justification for a 1 per cent sample. Students, foreign members, faculty, sustaining members, supporting members or other categories of memberships not actively engaged in the field of librarianship were excluded.

The stratification percentages for sex differences within the three types of librarianship were determined in various ways. The number of males for the special library sample was obtained by recourse to the Special Libraries Association 1973 salary survey. This reported approximately 25 per cent male membership (10, p. 616).

Schiller reports a U. S. Office of Education survey which reveals that one-third of all academic librarians are males (8, p. 12). According to Gerald Born, no statistics reported by sex were available on public librarians. The researcher thereupon selected a random sample of 100 public librarians from the 1974 American Library Association Directory. The random sample revealed an 18 per cent male makeup. This figure was used in determining the percentage of male public librarians to be selected for the research study.

Procedures for Collecting the Data

The specified number (310) of male and female special, public, and college/university librarians having been determined, a stratified systematic random sampling

procedure was set up. This technique, in which a systematic sample is chosen within each stratum, is described by Armore (1, p. 240). The advantages of stratified random sampling over simple random sampling are well known. Sax states that sampling errors are lessened in stratified sampling. He asserts that reducing the variability within each stratum will result in a more accurate estimate of the parameters under study (7, p. 136). McCarthy states, "For every 100 cases selected by proportional stratified sampling, it is necessary to obtain 125 cases by random sampling in order to secure the same degree of accuracy in estimating ρ " (6, p. 12).

Each subject was mailed a letter on February 17, 1975, which described the study, assured him of anonymity and instructed the individual in the method of completing the Job Descriptive Index. In addition, each addressee was sent a stamped, self-addressed, return envelope and one copy of the JDI. In order to limit the replies each subject was required to make and to restrict the instrument to but one page, each addressee received a copy of the JDI which identified the librarian by sex and by type of library in which the librarian worked. No coding or numbering of the JDI forms was done. It was not possible, therefore, to identify the individuals who returned the instruments but this circumstance was considered to be of no importance in this particular study.

Approximately one week after the original mailing, the addressees were sent a follow-up letter referring to the original letter and asking their cooperation by returning the JDI promptly. Copies of mailed letters and the Job Descriptive Index are found in Appendices A - D.

By March 21, 1975, when the results were coded and prepared for the computer, a total of 207 Job Descriptive Index answer sheets had been returned. In addition, eleven retirees, and other recipients of the original and follow-up letters replied, giving various reasons why, in their opinion, they could not complete the Job Descriptive Index. The 207 answer sheets represent a return rate of 66.77 per cent. Subsequently, seventeen of the JDI answer sheets were eliminated because the respondents, for one reason or another, had completed less than 60 per cent of the Job Descriptive Index form. Table I shows the composition of the sample by sex and type of librarian together with the number and percentage of return for each.

Gannon, Nothorn, and Carroll characterize the likely respondent to surveys as of a higher educational level, married, widowed or divorced, between the ages of thirty and forty-nine, and female (5, pp. 586-588). In soliciting returns from a sample of librarians, one would naturally address a large number of mature, well-educated females. In the present circumstances the fact that this

TABLE I
COMPOSITION OF STUDY SAMPLE WITH NUMBERS AND
PERCENTAGES OF RETURN BY TYPE OF
LIBRARIAN (N=310)

Type of Librarian	Male		%	Female		%
	Sent	Retd.		Sent	Retd.	
Public	16	9	56.0	75	56	74.6
Special	18	10	55.5	63	39	61.9
College/University	45	28	62.0	93	65	69.8
Total	79	47	59.4	231	160	69.2
Percentage of Total			25.48			74.52

researcher solicited returns from a 74.5 per cent female sample contributed materially to the satisfactory percentage of return.

The Instrument

The Job Descriptive Index was developed by Patricia C. Smith and associates at Cornell University during the period 1959-69, as a result of research known as the Cornell Studies of Satisfaction (11). The Job Descriptive Index (JDI) measures five components of job satisfaction and one global, or total aspect. The JDI employs a total of seventy-two descriptive words or phrases arrayed under the five areas of Work, Pay, Promotion, Supervision, Co-Workers. Smith holds that there are alternative stimuli which influence a worker's total evaluation of his job satisfaction and that job satisfaction has a multi-dimensional character which justifies the five scales she devised for the Job Descriptive Index (11, p. 25).

With the development of factor analysis techniques and the advent of large-scale computers came the potential to analyze job satisfaction more thoroughly. Computer-assisted factor analysis revealed that a number of readily identifiable factors combine to aggregate job satisfaction (11, p. 29). Smith and her co-workers concluded that the five elements---work, pay, people, supervision and promotional possibilities---were clearly

identifiable as factors combining to determine overall job satisfaction. After extensive analysis of the Job Descriptive Index in four studies involving four different populations, Smith concludes:

Results from the factor analysis of items gives strong support to the claim that the differentiation of job attitudes demonstrated in a number of situations results from discriminable responses to specific aspects of job conditions (e. g., the tiresomeness of the work, promotion on ability, tactfulness of supervision). There is support for the contention that workers do respond differentially to specific aspects of the work which produce general attitudes to particular areas (Work, Pay, etc.) and that differentiation of attitudes to areas is not solely an artifact resulting from questioning which forces attention on the dimensions suggested by the researcher (11, p. 62).

Of the JDI's validity, Smith states, "The JDI scales, as scored by the direct method, show consistent discriminant and convergent validity. The validity of the JDI exceeds that of the rating methods: the loadings on relevant factors are generally higher, and loadings on supposedly distinct factors lower (11, p. 67)." Smith reports that the corrected split-half internal consistency coefficient exceeds .80 for each of the scales contained in the JDI (11, p. 74). In Vroom's opinion the JDI was the most carefully constructed job satisfaction instrument in existence in 1964 (12).

Procedures for the Analysis of Data

The research hypotheses listed in Chapter I were restated in the null hypothesis form to permit the

statistical testing of the hypotheses since the null hypothesis is a specific hypothesis whereas a research hypothesis is usually stated in more general terms which do not lend themselves to tests of significance.

The null hypotheses were then tested using one-way and two-way analysis of variance programs available in the North Texas State University Computing Center. The analysis of variance is employed to test the significance of differences between the means of various samples. The analysis of variance is a suitable technique to use in deciding whether the variation between means is greater than that which may be expected from random sampling fluctuations.

Where the analysis of variance led to a significant result, the Scheffé method of multiple comparison was employed. The Scheffé method permits the comparison between groups of unequal numbers as is the case in the present instance while other methods such as that of Tukey, Newman-Keuls, or Duncan require equal numbers.

According to Ferguson, the Scheffé method is more rigorous than the other three tests and thus will result in fewer significant differences (4). For this reason, the .10 significance level as suggested by Ferguson was employed rather than the conventional .05 level.

With hypotheses 3 and 4, a t test was employed to test the significance of the difference between two means for independent samples.

Summary

In this chapter the method of choosing the sample to be surveyed and its constitution were described, the survey instrument was discussed, and the procedures for the collection and the treatment of the data were outlined.

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CHAPTER IV

ANALYSIS OF THE DATA

In this chapter, the research hypotheses stated in Chapter I will be tested employing t tests or one-way and two-way analysis of variance measures as appropriate to the hypotheses. Significant findings will be tested by the Scheffé method of multiple comparison with .10 chosen as the significance level because of the stringency of the Scheffé test.

The first research hypothesis states that statistically significant differences in job satisfaction exist between public, college/university, and special librarians. The null hypothesis of no difference was assumed. The sample sizes, means, and standard deviations for total job satisfaction of the three types of librarians are given in Table II.

TABLE II
SAMPLE SIZE, MEANS, AND STANDARD DEVIATIONS OF
PUBLIC, COLLEGE/UNIVERSITY, AND SPECIAL
LIBRARIANS ON TOTAL JOB
SATISFACTION (N=190)

Type of Librarian	Number	Mean	Standard Deviation
Public	57	157.33	30.16
College/University	85	145.89	31.60
Special	48	143.53	32.31

Figures in Table III below give the results of a one-way analysis of variance test which was used to test the significance of the differences between means listed in Table II above.

TABLE III
ANALYSIS OF VARIANCE FOR TOTAL JOB SATISFACTION
FOR PUBLIC, COLLEGE/UNIVERSITY, AND
SPECIAL LIBRARIANS

Source of Variation	Sum of Squares	Degrees of Freedom	Variance Estimate
Between	6200.32	2	3100.16
Within	183894.66	187	983.39
Total	190094.99	189	F: 3.15

The resulting F-ratio of 3.15 is significant at the .05 level. The null hypothesis of no difference between means in total job satisfaction is rejected.

An alternate hypothesis that Total JDI scores for public librarians are statistically significantly higher than for special librarians can be tested with the same data and the Scheffé test. The resulting F-ratio of 2.52 for the Scheffé with 2 and 187 degrees of freedom is significant at the .10 level. The hypothesis is accepted. A second alternate hypothesis that total JDI scores for public librarians are statistically significantly higher than for college/university librarians may be tested with the same data also. With the Scheffé test at the

.10 level of significance the resulting F-ratio of 2.27 fails the minimum F-ratio of 2.33 for significance. Thus the second alternate hypothesis is rejected.

The second research hypothesis states that statistically significantly greater job satisfaction exists among librarians on small staffs than among librarians on large staffs. A small staff is defined as one comprising less than twenty people while a large staff was taken to be one having twenty or more people. The null hypothesis of no difference between means was assumed. Table IV gives the sample size, means, and standard deviation for job satisfaction by staff size.

TABLE IV
SAMPLE SIZE, MEANS, AND STANDARD DEVIATIONS
FOR TOTAL JOB SATISFACTION BY SMALL
AND LARGE STAFFS (N=188)

Staff Size	Number	Mean	Standard Deviation
Small: less than 20	91	144.71	32.32
Large: 20 or more	97	151.99	31.01

The figures in Table V indicate the results of the one-way analysis of variance.

TABLE V
ANALYSIS OF VARIANCE ON TOTAL JOB SATISFACTION
FOR SMALL AND LARGE LIBRARY STAFFS

Source of Variation	Sum of Squares	Degrees of Freedom	Variance Estimate
Between	2490.14	1	2490.14
Within	186323.95	186	1001.74
Total	188814.09	187	F: 2.49

The resulting F-ratio of 2.49 for 1 and 186 degrees of freedom is not significant. Thus, the null hypothesis of no difference in the total job satisfaction means between small and large staffs is accepted.

The third research hypothesis states that librarians' JDI scores on Pay will be statistically significantly lower than the norms for other workers. The norms for other workers, stratified by sex, have been supplied by Patricia C. Smith (5). Inasmuch as the research hypothesis makes no differentiation by sex, the data for both males and females must differ statistically significantly from the Smith norms or the research hypothesis will be rejected.

Sample size, means, and standard deviations for male librarians and for males in the Smith norms are given in the following table.

TABLE VI
 SAMPLE SIZE, MEANS, AND STANDARD DEVIATIONS
 FOR MALE LIBRARIANS AND SMITH MALE NORMS
 ON THE JDI VARIABLE PAY

Data	Number	Mean	Standard Deviation
Male Librarians	42	31.53	11.27
Smith Male Norms	1966	29.90	14.53

When a t test is applied to the data listed above with 2006 degrees of freedom, the result is a t-ratio of .72. The figure is not significant.

The data on the JDI variable Pay for female librarian subjects in the present study and for females in the Smith norms are as follows:

TABLE VII
 SAMPLE SIZE, MEANS, AND STANDARD DEVIATIONS
 FOR FEMALE LIBRARIANS AND SMITH FEMALE
 NORMS ON THE JDI VARIABLE PAY

Data	Number	Mean	Standard Deviation
Female Librarians	143	31.13	12.23
Smith Female Norms	635	27.90	16.65

Applying a t test with 776 degrees of freedom to the above data results in a t-ratio of 2.60 which is significant at the .01 level. This result supports a hypothesis

which would be the opposite of the research hypothesis. That is, the result supports the hypothesis that female librarians' JDI scores on Pay are statistically significantly higher than the Smith norms for female workers.

Inasmuch as both of the t tests ended in results which failed to support the research hypothesis, it is rejected.

The fourth research hypothesis states that Librarians' JDI scores on Work will be statistically significantly higher than the norm for other workers. As with the above hypothesis, the Smith norms for Work have been stratified by sex. Two tests will be applied and each must result in a significant finding or the research hypothesis will be rejected.

Sample size, means, and standard deviations for male librarians and Smith male norms follow in the table below.

TABLE VIII

SAMPLE SIZE, MEANS, AND STANDARD DEVIATIONS
FOR MALE LIBRARIANS AND SMITH MALE NORMS
ON THE JDI VARIABLE WORK

Data	Number	Mean	Standard Deviation
Male Librarians	42	37.79	9.50
Smith Male Norms	1971	36.57	10.54

A t test applied to the above data with 2,011 degrees of freedom results in a t-ratio of .74. The t-ratio is not significant.

Sample size, means, and standard deviations for female librarians and Smith female norms are found in the following table.

TABLE IX

SAMPLE SIZE, MEANS, AND STANDARD DEVIATIONS
FOR FEMALE LIBRARIANS AND SMITH FEMALE
NORMS ON THE JDI VARIABLE WORK

Data	Number	Mean	Standard Deviation
Female Librarians	148	39.18	8.96
Smith Female Norms	638	35.74	9.88

Applying a t test to the data in the above table results in a t-ratio of 3.87. A t-ratio of 3.87 with 784 degrees of freedom is significant at the .001 level. However, since the t-ratio for the male populations was not significant, the research hypothesis is rejected.

Research hypothesis 5(a) states that public librarians' JDI scores on (a) Promotion will be statistically significantly higher than the scores of other librarians. The null hypothesis of no difference in means was assumed. The sample size, means, and standard deviations for the

scores of the three types of librarians with reference to the variable Promotion are given in Table X.

TABLE X
SAMPLE SIZE, MEANS, AND STANDARD DEVIATIONS
ON THE JDI VARIABLE PROMOTION BY TYPE
OF LIBRARIAN (N=167)

Type of Librarian	Number	Mean	Standard Deviation
Public	51	13.14	8.36
College/University	74	11.03	7.03
Special	42	9.67	6.60

The analysis of variance was used to test the significance of the differences in means of the data listed in the table above. The figures in Table XI give the results of the one-way analysis of variance.

TABLE XI
ANALYSIS OF VARIANCE ON THE JDI VARIABLE
PROMOTION BY TYPE OF LIBRARIAN

Source of Variance	Sum of Squares	Degrees of Freedom	Variance Estimate
Between	289.57	2	144.78
Within	8883.32	164	54.17
Total	9172.89	166	F: 2.67

The resulting F-ratio of 2.67 with 2 and 164 degrees of freedom is not significant at the .05 confidence level.

The null hypothesis of no difference in the JDI variable Promotion means between public and the other types of librarians is accepted.

Research hypothesis 5(b) states that public librarians' JDI scores on People will be statistically significantly higher than the scores of other librarians. The null hypothesis of no difference in means was assumed. Table XII gives the sample size, means, and standard deviations for JDI scores of the three types of librarians on the variable People.

TABLE XII
SAMPLE SIZE, MEANS, STANDARD DEVIATIONS
ON THE JDI VARIABLE PEOPLE BY TYPE OF
LIBRARIAN (N=190)

Type of Librarian	Number	Mean	Standard Deviation
Public	57	43.70	10.50
College/University	85	38.12	9.16
Special	48	41.75	9.53

The analysis of variance was employed to test the significance of the difference in means of the three types of librarians. The figures in Table XIII reveal the results of the analysis of variance.

TABLE XIII
ANALYSIS OF VARIANCE ON THE JDI VARIABLE
PEOPLE BY TYPE OF LIBRARIAN

Source of Variance	Sum of Squares	Degrees of Freedom	Variance Estimate
Between	134.51	2	67.25
Within	20239.63	186	108.82
Total	20374.14	188	F: .62

The resulting F-ratio of .62 with 2 and 186 degrees of freedom is not significant. Thus, the null hypothesis of no difference in the JDI variable People means between public and other types of librarians is accepted.

The sixth research hypothesis states that college/university librarians' JDI scores on Work will be statistically lower than the scores of public or special librarians. As with the previous research hypotheses the null hypothesis of no difference between means was assumed. Table XIV gives the sample sizes, means, and standard deviations of the scores of the various types of librarians on the JDI variable Work.

TABLE XIV
SAMPLE SIZE, MEANS, AND STANDARD DEVIATIONS
ON THE JDI VARIABLE WORK BY TYPE OR
LIBRARIAN (N=190)

Type of Librarian	Number	Mean	Standard Deviation
Public	57	41.37	7.15
College/University	85	38.12	9.16
Special	48	37.23	10.43

The analysis of variance was applied to the statistical data in the above table and the figures in Table XV reveal the results of that test.

TABLE XV
ANALYSIS OF VARIANCE ON THE JDI VARIABLE
WORK BY TYPE OF LIBRARIAN

Source of Variance	Sum of Squares	Degrees of Freedom	Variance Estimate
Between	533.14	2	266.57
Within	15026.57	187	80.36
Total	15559.71	189	F: 3.32

The resulting F-ratio of 3.32 with 2 and 187 degrees of freedom is significant at the .05 level. Thus the null hypothesis is rejected. An alternate hypothesis that public librarians' JDI scores for Work will be statistically significantly higher than that for special librarians may be tested using the same data as above with the Scheffé F-test at the .10 level as has been attempted earlier. The resulting F-ratio of 2.78 is significant at the .10 level. The alternate hypothesis is accepted. A second hypothesis that public librarians' JDI scores for Work will be statistically significantly higher than that for college/university librarians can also be tested using the above data and the Scheffé F-test. The resulting F-ratio of 2.24 is less than the 2.33 ratio

needed for the Scheffé test at .10. The second alternate hypothesis is rejected.

Research hypothesis 7(a) states that male librarians' JDI scores on Pay will be statistically significantly higher than the scores of female librarians. The null hypothesis of no difference was once again assumed. Table XVI gives sample size, means, and standard deviations for the JDI variable Pay by sex.

TABLE XVI
SAMPLE SIZE, MEANS, AND STANDARD DEVIATIONS
ON THE JDI VARIABLE PAY BY SEX (N=185)

Sex	Number	Mean	Standard Deviation
Male	42	15.76	5.63
Female	143	16.03	6.11

One-way analysis of variance was employed to test the significance of the difference between the two means. The results of the analysis of variance are provided in Table XVII.

TABLE XVII
ANALYSIS OF VARIANCE ON THE JDI
VARIABLE PAY BY SEX

Source of Variance	Sum of Squares	Degrees of Freedom	Variance Estimate
Between	2.42	1	2.42
Within	6610.44	183	36.12
Total	6612.86	184	F: .07

The resulting F-ratio of .07 is not significant.

The null hypothesis of no difference in means on the JDI variable Pay is accepted.

Research hypothesis 7(b) states that male librarians' scores on Promotion will be statistically significantly higher than the scores of female librarians. As before, the null hypothesis of no difference between means was assumed.

The sample size, means, and standard deviations for males and females on the variable Promotion are given in the table below.

TABLE XVIII

SAMPLE SIZE, MEANS, AND STANDARD DEVIATIONS
ON THE JDI VARIABLE PROMOTION BY
SEX (N=167)

Sex	Number	Mean	Standard Deviation
Male	37	10.41	7.03
Female	130	11.59	7.55

As before, the analysis of variance was used to test the significance of the difference between the two means. The results are tabulated in Table XIX.

TABLE XIX
ANALYSIS OF VARIANCE ON THE JDI
VARIABLE PROMOTION BY SEX

Source of Variation	Sum of Squares	Degrees of Freedom	Variance Estimate
Between	40.58	1	40.58
Within	9132.31	165	55.35
Total	9172.88	166	F: .73

The resulting F-ratio of .73 is not significant. The null hypothesis of no difference in means on the JDI variable Promotion is accepted.

The eighth research hypothesis states that female librarians' JDI scores on Work will be statistically significantly higher than the scores of male librarians. The null hypothesis of no difference between means was assumed once more. Table XX reveals the sample size, means, and standard deviations of scores for males and females on the variable Work.

TABLE XX
SAMPLE SIZE, MEANS, AND STANDARD DEVIATIONS
ON THE JDI VARIABLE WORK BY SEX (N=190)

Sex	Number	Mean	Standard Deviation
Male	42	37.79	9.50
Female	148	39.18	8.96

The analysis of variance was employed to test the significance of the difference between means. The figures in Table XXI indicate the results of the analysis for the above data.

TABLE XXI
ANALYSIS OF VARIANCE ON THE JDI
VARIABLE WORK BY SEX

Source of Variance	Sum of Squares	Degrees of Freedom	Variance Estimate
Between	63.21	1	63.21
Within	15496.50	188	82.43
Total	15559.71	189	F: .77

The resulting F-ratio of .77 is not significant. Thus, the null hypothesis of no difference in means on the JDI variable Work is accepted.

The ninth research hypothesis states that male university librarians' JDI scores on Pay will be statistically significantly higher than the scores of other librarians. Again the null hypothesis of no difference in means was assumed. The two-way analysis of variance is employed to test the hypothesis. Table XXII provides the sample sizes, means, and standard deviations for the data which include both sexes and three types of librarians.

TABLE XXII

SAMPLE SIZE, MEANS, AND STANDARD DEVIATIONS
FOR THE JDI VARIABLE PAY BY SEX AND
TYPE OF LIBRARIAN (N=185)

	Numbers		
	Males	Females	Row
Public	9	48	57
College/University	23	59	82
Special	10	36	46
Columns	42	143	185
	Means		
	Males	Females	Row
Public	17.89	16.40	16.63
College/University	14.04	16.12	15.54
Special	17.80	15.42	15.93
Columns	15.76	16.04	15.97
	Standard Deviations		
	Males	Females	Row
Public	3.72	5.95	5.66
College/University	6.16	5.66	5.84
Special	4.78	7.11	6.70
Columns	5.63	6.11	5.99

The result of the two-way analysis of variance for the data given in the above table is reported in Table XXIII which follows.

TABLE XXIII

ANALYSIS OF VARIANCE FOR THE JDI VARIABLE
PAY BY TYPE OF LIBRARY AND SEX

	Sum of Squares	Degrees of Freedom	Variance Estimate
Row	85.79	2	42.90
Column	10.13	1	10.13
Interaction	104.34	2	52.17
Within	6639.84	179	35.98

The resulting F-ratio of .28 is not significant.
The null hypothesis is accepted.

Summary

The preceding pages reported the testing of each of the research hypotheses by either the t test or the analysis of variance. Where the test of the hypothesis was found to be significant at the .05 level, the Scheffé test was employed to determine which of the differences between means was significant. The Scheffé test was made at the .10 level.

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CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Usable data relating to six elements of job satisfaction were collected from 190 of a total sample of 310 librarians. The librarians, both male and female, represented three types of libraries: public, college/university, and special. Librarians were chosen by means of stratified random sampling techniques from library association membership lists. The data were collected by means of the Job Descriptive Index, an instrument developed by Patricia C. Smith, and were subjected to conventional statistical testing techniques.

One purpose of the research was to determine the differences in job satisfaction of professional librarians working in public, college/university, and special libraries (Hypotheses 1, 5, 6). The significance of differences in job satisfaction scores was tested by means of the *t* test and the analysis of variance.

The second purpose of the study was to determine if any differences the study uncovered were a factor of sex (Hypotheses 7, 8).

The third purpose of the research was to determine if differences in job satisfaction could be attributed

to the size of the library staff (Hypothesis 2). The researcher was also interested in determining how librarians' scores compared with population norms on two scales of the Job Descriptive Index (Hypotheses 3, 4).

The data in Table III indicate a significant F-ratio which supports the thesis that differences in job satisfaction do exist among librarians employed in various types of libraries. Applying a Scheffé test to the data for public and special librarians results in a significant F-ratio, while applying a Scheffé test to the differences of means between college/university librarians and public librarians results in a F-ratio which fails to attain the .10 level of significance.

The data in Table XIV relating to scores of public, college/university and special librarians on the JDI variable Work when submitted to an analysis of variance test results in a significant F-ratio. An alternate hypothesis stating that public librarians' JDI scores on Work will be statistically significantly higher than that of a special librarian is accepted when the statistical data are subjected to a Scheffé test at the .10 level. An hypothesis that public librarians' JDI scores on Work will be statistically significantly higher than that of college/university librarians narrowly fails to equal the 2.33 ratio needed for the Scheffé test at the .10 level. All other research hypotheses failed to exhibit the required

statistical significance in differences between means and were rejected.

Findings

Research findings on hypothesis one

Hypothesis one stated that statistically significant differences in job satisfaction exist between special, college/university, and public librarians. Total job satisfaction scores were obtained for all respondent librarians using the Job Descriptive Index. By means of an analysis of variance technique for testing the significance of the differences between the resulting means the following was found:

1. Statistically significant differences in total, or global, job satisfaction exist between public and special librarians. Public librarians have a larger total job satisfaction mean score and a smaller standard deviation than do special librarians.

2. Public librarians also have a larger total job satisfaction score and a smaller standard deviation than do college/university librarians but the difference in means between the two types of librarians results in a Scheffé test F-ratio of 2.27 which narrowly ($p=.11$) fails the required ratio of 2.33 for the .10 level.

Research findings on hypothesis two

Hypothesis two states that statistically significantly greater job satisfaction exists among librarians

on small staffs than among librarians on large staffs. A small library staff was posited to be one with less than twenty people while a large staff was held to be one of twenty or more people.

The ninety-one librarians who worked on small staffs were found to have a smaller total job satisfaction mean score than did the ninety-seven librarians on large staffs while the standard deviation for small staff members was also somewhat larger than for large staff members. The F-ratio which resulted from an analysis of variance, while well short of significance, comes closer to supporting the converse of the research hypothesis.

Research findings on hypothesis three

Hypothesis three states that librarians' JDI scores on Pay will be statistically significantly lower than the norms for other workers. The norms are those supplied for 12,940 male and female workers by Patricia C. Smith. Male and female differences in means were tested separately since there was no way to gather the Smith data. Male librarians had a higher mean score on the JDI variable than did the males in the Smith norms and the standard deviation was smaller. The t test, when applied, resulted in a ratio of .72 which lacks significance. The female librarians had a higher mean score and a smaller standard deviation than did the Smith female norms on the JDI variable Pay. The result of a t test of the

differences in means results in a value which is significant at the .01 level but it supports a premise that female librarians are more satisfied with their pay than other females. This is the reverse of the research hypothesis.

Research findings on hypothesis four

Hypothesis four states that librarians JDI scores on Work will be statistically significantly higher than the norms for other workers. The norms are the scores for 12,940 people as gathered by Smith. These, too, are stratified by sex. As with hypothesis three, two t tests, one for males and one for females, were made.

Male librarians reported a mean score somewhat larger than that for Smith male norms and a standard deviation which was smaller but a t test reported a ratio of .74 which is not significant.

On the JDI variable Work female librarians reported a mean score considerably larger than the Smith female norms on Work and a standard deviation which was smaller also. A t test resulted in a t-ratio of 3.87 which is significant at the .001 level.

Because the t-ratio for males on the JDI variable Work was not significant, the research hypothesis was rejected.

Research findings on hypothesis five

Hypothesis 5(a) states that public librarians' JDI scores on (a) Promotion will be statistically significantly

higher than the scores of other librarians. Public librarians did report a larger mean on the variable Promotion than did college/university or special librarians. They also had a larger standard deviation than either of the two other types of librarians. The analysis of variance resulted in an F-ratio of 2.67 which was not significant ($p = .07$) at the .05 level. However, a Scheffé F-test results in an F-ratio of 2.56 when applied to the difference between means of public and special librarians. This ratio is significant at the .10 level. The .10 level had been set because of the stringency of the Scheffé.

Hypothesis 5(b) states that public librarians' JDI scores on People will be statistically significantly higher than the scores of other librarians. Public librarians scored a higher mean score than either college/university or special librarians, but public librarians also had a larger standard deviation than either of the other two types of librarians. The F-ratio after an analysis of variance test was .62. That is not significant.

Research findings on hypothesis six

Hypothesis six states that university librarians' JDI scores on Work will be statistically significantly lower than the scores of public or special librarians. College/university librarians exhibited a mean score on

librarians were found to have both a mean score on the JDI variable Promotion somewhat lower than scores for female librarians and also a somewhat smaller standard deviation than the females. The F-ratio which resulted from the analysis of variance was not significant at .73.

Research findings on hypothesis eight

Hypothesis eight states that female librarians' JDI scores on Work will be statistically significantly higher than the scores of male librarians. Data pertaining to the variable for both sexes reveal that female librarians do, indeed, have a higher mean score on Work than do males. They also have a somewhat smaller standard deviation than do males. However, the differences in both instances are small and an analysis of variance test results in an F-ratio of .77 which is not significant.

Research findings on hypothesis nine

Hypothesis nine states that male university librarians' JDI scores on Pay will be statistically significantly higher than the scores of other librarians. Computer-manipulated data reveal that male college/university librarians in the present sample reported a lower mean score on Pay than any of the other groups of librarians; the male public librarian scored the highest on the variable followed next by the male special librarian. In addition, all classes of female librarians

scored higher than the male college/university librarian in mean score. On the matter of standard deviation, the male college/university librarian had the second largest standard deviation of all classes of librarians. Only the female special librarian had a larger standard deviation. A two-way analysis of variance test resulted in no significant F-ratios.

Conclusions

The following conclusions may be drawn from the study:

1. Librarians differ in the amount of satisfaction they derive from their jobs. Differences arise partly as a function of the type of library in which librarians work.

2. Special librarians evidence less job satisfaction than do other librarians because (a) promotional opportunities are restricted in special libraries due in part to their size, and (b) work stresses are greater in special libraries than in other libraries.

3. Women are generally happier as librarians than are men notwithstanding that men receive higher pay and occupy more high administrative positions.

4. Librarians in general experience somewhat greater job satisfaction than do other workers as one

would expect, since the work and conditions of work might be considered superior to that of most workers.

5. The number of employees a library has does little, if anything, to affect the job satisfaction of the individual.

Discussion of Conclusions

With reference to the first conclusion, the following comment appears pertinent. Data presented in Table XXIV give the means and standard deviations for all scales of the Job Descriptive Index by type of librarian and by sex. Assuming that the five scales of the JDI are independent, successive events, the statistical probability of public librarians scoring higher than either of the two other types of librarians on all of the five scales is one in 242 ($p < .005$).

With reference to the second conclusion, it is appropriate to note that most special libraries have small staffs. In addition, there are no more than two or, occasionally, three levels of authority in most special libraries. Thus, it may be inappropriate to include the JDI promotion scale in assessing the job satisfaction of special librarians.

In the matter of the third conclusion, the data in Table XXIV reveal that women librarians exceed men librarians on four discrete scales of the Job Descriptive Index

TABLE XXIV
SAMPLE SIZES, MEANS, STANDARD DEVIATIONS FOR FIVE SCALES OF JOB
SATISFACTION AND ONE TOTAL JOB SATISFACTION SCORE BY
TYPE OF LIBRARIAN AND SEX

Librarian	Work	Supervision	People	Pay	Promotion	Total
Public	$\bar{x}$ 41.37 s 7.15 n 57	$\bar{x}$ 42.75 s 10.37 n 48	$\bar{x}$ 43.70 s 10.50 n 57	$\bar{x}$ 16.63 s 5.66 n 57	$\bar{x}$ 13.14 s 8.36 n 51	$\bar{x}$ 157.33 s 30.16 n 57
College/ Univer- sity	$\bar{x}$ 38.12 s 9.16 n 85	$\bar{x}$ 40.60 s 12.34 n 80	$\bar{x}$ 41.94 s 10.87 n 84	$\bar{x}$ 15.53 s 5.84 n 82	$\bar{x}$ 11.02 s 7.02 n 74	$\bar{x}$ 145.90 s 31.60 n 85
Special	$\bar{x}$ 37.23 s 10.43 n 48	$\bar{x}$ 41.02 s 12.50 n 48	$\bar{x}$ 41.75 s 9.53 n 48	$\bar{x}$ 15.93 s 6.70 n 46	$\bar{x}$ 9.66 s 6.60 n 42	$\bar{x}$ 143.52 s 32.31 n 48
Male	$\bar{x}$ 37.78 s 9.49 n 42	$\bar{x}$ 41.82 s 9.50 n 38	$\bar{x}$ 40.69 s 11.25 n 42	$\bar{x}$ 15.76 s 5.63 n 42	$\bar{x}$ 10.40 s 7.03 n 37	$\bar{x}$ 146.46 s 29.73 n 42
Female	$\bar{x}$ 39.17 s 8.95 n 148	$\bar{x}$ 40.81 s 12.80 n 138	$\bar{x}$ 42.91 s 10.14 n 147	$\bar{x}$ 16.03 s 6.11 n 143	$\bar{x}$ 11.60 s 7.55 n 130	$\bar{x}$ 149.37 s 32.32 n 148

and in Total job satisfaction. Men score higher than women only on the JDI scale on supervision.

With reference to the fifth conclusion, it is quite possible that differences in job satisfaction would become apparent if the definitions of small and large staffs were changed.

Implications of the Study

Factors other than those studied probably contribute to differences in job satisfaction among librarians. Although it was not directly assessed in the study, one such factor which deserves some consideration is the clientele of the respective libraries and the interaction of the clientele with the librarians. The public librarian will less frequently interact with highly qualified people while college or university librarians will routinely interact with qualified people in the instance of faculty members or graduate students. Special librarians will serve a highly competent clientele. In this situation, the public librarian may feel comfortable while the college/university and special librarians may feel ill at ease when trying to give service to people who have expertise in the subject area.

Personality factors can serve to influence librarians to accept employment in one type of library rather than another or one size of library rather than another.

Moreover, it may be that a particular personality profile can be determined for each of the three types of librarians.

Male librarians who usually occupy the more desirable administrative positions at better pay than women may not be as satisfied in their jobs because they have been educated primarily to be librarians and poorly educated for the position of administrator.

Female public librarians are happier than other librarians because of the supportive nature of the work and because they experience success readily. It is likely also that female public librarians are better prepared by undergraduate, as well as graduate, education to work with the clientele and subject matter of public libraries than are librarians who work in special or college/university libraries.

Recommendations

Individuals wishing to continue job satisfaction research among librarians should consider the following items:

1. A subsequent study might include not only the type of library in which the subjects work, but also the nature of the work they perform. Should one take this into consideration, a clearer differentiation of job satisfaction may result.

2. A study of the differences in job satisfaction between library managers and non-supervisory librarians may be rewarding.

3. School librarians should be studied for their job satisfaction.

4. Certain descriptive phrases currently incorporated in the Job Descriptive Index may have no value in differentiating the job satisfaction of professional librarians. A researcher might consider substituting phrases which he considers will have more value in the differentiation process.

5. The factor of staff size should be examined further to determine if it might influence job satisfaction. In doing so care should be taken to control other variables such as type of library since, for example, special libraries generally have smaller staffs than do public or university libraries.

6. Library schools should restructure courses in library science curricula to emphasize management principles and practices. Moreover, it should be clearly indicated to library school students that promotions in libraries most often lead to administrative positions that:

- a. Require knowledge of management principles and practices.

- b. Remove the librarian from the service function which librarians enjoy.

Subjects' Comments Relative to the
Job Descriptive Index

Approximately one-third of the subjects offered some comment about the Job Descriptive Index. While these comments varied widely, they centered on either the supervision scale or the promotional scale.

When they commented on the supervision scale, the subjects most often stated that the scale was not pertinent to their situation since they were the supervisor or director, that they had no supervisor, that the library board was the supervising body or that the academic dean, who did not concern himself with the ordinary library operations, was the titular supervisor.

In the instance of the promotion scale, much the same type of comment was offered. Subjects stated that the library was a one-man library or the staff was too small for promotions. More often the subject stated that he was the director or librarian, that he would have to move to gain a promotion or that faculty status imposed long intervals of time between promotions.

Because of the circumstances explained in the summarized comments, the two scales, supervision and promotion were completed by fewer people than were the other three scales.

APPENDIX A

Job Descriptive Index (JDI)

These five short questionnaires relate to how you feel about (1) your work; (2) the supervision you receive; (3) the people you work with; (4) your pay; and (5) your prospects for promotion. There are also two general questions at the bottom of the sheet.

Please place a Y (Yes), an N (No), or a ? (Don't Know) opposite each word or phrase. Fill in every blank even if you aren't sure of your opinion. Then place a checkmark in the appropriate space for the two questions at the bottom. (The whole operation will require seven or eight minutes.)

JOB DESCRIPTIVE INDEX (JDI)*

<u>My Work Is:</u>	<u>My Supervisor:</u>	<u>The People I Work With:</u>
☐ Fascinating	☐ Asks my advice	☐ Stimulating
☐ Routine	☐ Hard to please	☐ Boring
☐ Satisfying	☐ Impolite	☐ Slow
☐ Boring	☐ Praises good work	☐ Ambitious
☐ Good	☐ Tactful	☐ Stupid
☐ Creative	☐ Influential	☐ Responsible
☐ Respected	☐ Up-to-date	☐ Fast
☐ Hot	☐ Doesn't supervise enough	☐ Intelligent
☐ Pleasant	☐ Quick-tempered	☐ Easy to make enemies
☐ Useful	☐ Tells me where I stand	☐ Talk too much
☐ Tiresome	☐ Annoying	☐ Smart
☐ Healthful	☐ Stubborn	☐ Lazy
☐ Challenging	☐ Knows job well	☐ Unpleasant
☐ On your feet	☐ Bad	☐ No privacy
☐ Frustrating	☐ Intelligent	☐ Active
☐ Simple	☐ Leaves me on my own	☐ Narrow interests
☐ Endless	☐ Around when needed	☐ Loyal
☐ Gives sense of accomplishment	☐ Lazy	☐ Hard to meet

<u>My Pay:</u>	<u>My Promotional Possibilities:</u>
☐ Income adequate for normal expenses	☐ Good opportunity for advancement
☐ Satisfactory profit sharing	☐ Opportunity somewhat limited
☐ Barely live on income	☐ Promotion on ability
☐ Bad	☐ Dead-end job
☐ Income provides luxuries	☐ Good chance for promotion
☐ Insecure	☐ Unfair promotion policy
☐ Less than I deserve	☐ Infrequent promotions
☐ Highly paid	☐ Regular promotions
☐ Underpaid	☐ Fairly good chance for promotion

A. The total number of people working in your library is:

1-4 5-9 10-19 20-34 35-49 50+

B. If you had your choice, you would work in a

Special___, Public___, College/University___library.

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APPENDIX B

Scoring for the Job Descriptive
Index (JDI)

SCORING FOR JDIWORK ON PRESENT JOB

	<u>Y ? N</u>
Fascinating	3 1 0
Routine	0 1 3
Satisfying	3 1 0
Boring	0 1 3
Good	3 1 0
Creative	3 1 0
Respected	3 1 0
Hot	0 1 3
Pleasant	3 1 0
Useful	3 1 0
Tiresome	0 1 3
Healthful	3 1 0
Challenging	3 1 0
On your feet	0 1 3
Frustrating	0 1 3
Simple	0 1 3
Endless	0 1 3
Gives sense of accomplishment	3 1 0

PRESENT PAY

	<u>Y ? N</u>
Income adequate for normal expenses	3 1 0
Satisfactory profit sharing	3 1 0
Barely live on income	0 1 3
Bad	0 1 3
Income provides luxuries	3 1 0
Less than I deserve	0 1 3
Highly paid	3 1 0
Underpaid	0 1 3
Insecure	0 1 3

OPPORTUNITIES FOR PROMOTION

	<u>Y ? N</u>
Good opportunity for advancement	3 1 0
Opportunity somewhat limited	0 1 3
Promotion on ability	3 1 0
Dead-end job	0 1 3
Good chance for promotion	3 1 0
Unfair promotion policy	0 1 3
Infrequent promotions	0 1 3
Regular promotions	3 1 0
Fairly good chance for promotion	3 1 0

SUPERVISION ON PRESENT JOB

	<u>Y ? N</u>
Asks my advice	3 1 0
Hard to please	0 1 3
Impolite	0 1 3
Praises good work	3 1 0
Tactful	3 1 0
Influential	3 1 0
Up-to-date	3 1 0
Doesn't supervise enough	0 1 3
Quick-tempered	0 1 3
Tells me where I stand	3 1 0
Annoying	0 1 3
Stubborn	0 1 3
Knows job well	3 1 0
Bad	0 1 3
Intelligent	3 1 0
Leaves me on my own	3 1 0
Around when needed	3 1 0
Lazy	0 1 3

PEOPLE ON YOUR PRESENT JOB

	<u>Y ? N</u>
Stimulating	3 1 0
Boring	0 1 3
Slow	0 1 3
Ambitious	3 1 0
Stupid	0 1 3
Responsible	3 1 0
Fast	3 1 0
Intelligent	3 1 0
Easy to make enemies	0 1 3
Talk too much	0 1 3
Smart	3 1 0
Lazy	0 1 3
Unpleasant	0 1 3
No privacy	0 1 3
Active	3 1 0
Narrow interests	0 1 3
Loyal	3 1 0
Hard to meet	0 1 3

Note: Instrument is job descriptive rather than job evaluative.

APPENDIX C

Initial Cover Letter Sent
to Sample

P. O. Box 13864, NTSU Station
Denton, TX 76201
February 15, 1975

Dear Librarian:

What is the working librarian's attitude toward his or her job? What do you as librarian think of library working conditions, your fellow employees, your pay, your prospects for advancement? Do you think your boss does a good job of supervising you?

We librarians don't have much firm knowledge concerning the librarian's job satisfaction. Much remains to be learned about how we view our jobs. With your anonymous help, the results of this doctoral study may add to our information about ourselves.

You need not put your name on the enclosed answer sheet or on the postpaid return envelope. Neither the answer sheet nor the envelope contains a number, code, or other device by which I might identify you. My interest is in the profession of librarianship as a whole. The operation of replying to the five scales and putting the answer sheet in the envelope will take about eight minutes.

The few minutes you give may enable us to learn how we can make jobs in librarianship more enjoyable for everyone. Since you are one of very few librarians in the country to whom this short inquiry is directed, I hope that you will consider it a meaningful study worth your time. Please help me help our profession by filling out the inquiry form and returning it in the enclosed postage paid envelope while it is still fresh in your mind. I would like to process the returns by March 1 so please mail this to me soon. Thank you.

Sincerely,

John J. Minter

John J. Minter
Assistant Professor, L. S.

Enclosure

This study is authorized and supported by the College of Education of North Texas State University through the J. C. Matthews Chair for Higher Education and Center for Higher Education.

Dwane Kingery
Matthews Professor of Higher Education

APPENDIX D

Follow-Up Letter Sent
to Sample

P. O. Box 13864, NTSU Station
Denton, TX 76201
February 23, 1975

Dear Librarian:

About a week ago I sent you a note requesting your help with research in librarianship that I am attempting. The study, you will recall, concerned the work attitudes of practicing librarians like yourself.

You may have returned this already. I don't know because, as I assured you, neither the envelope nor the answer form were coded to identify you. If you have returned it, thank you. If you have not yet completed it, I hope that you will find a few minutes time today or tomorrow to do so.

Because this study depends on such a small sampling of all of the librarians in this country, your return is very important to me. I hope you will find time today to mark your replies on the form, place it in the return envelope and mail it. If you have misplaced the inquiry form but would still like to help me, I'd be happy to send you another form if you'll just request one.

Sincerely,

John J. Minter

John J. Minter
Assistant Professor, L. S.

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